ABSTRACT

A method of controlling connection of an AC power output to a load (11) and to a power supply grid (8). The AC power output is produced by an AC power generating system which includes an AC/AC convertor (3) and which is independently operable to supply power to the load (11). Operation of the AC/AC convertor (3) for independent operation is controlled in accordance with a reference (Unr) which is generated within the system. In order to connect the AC power output to the power supply grid (8) in addition to supplying the load (11), the reference (Enr) which was derived from the AC power output voltage (Vacc) during independent operation is replaced by another reference (Irp) which is derived from the voltage (Vacg) of the grid (8) so that the AC/AC convertor (3) is controlled by that other reference (Irp) when the AC power output is connected.to the grid (8) as well as supplying the power required by the load (11). In the event of disconnection of the AC power output from the power supply grid (8) or loss of the grid voltage (Vacg), the other reference (Irp) is replaced by the reference (Iinr) that is derived from the AC power output voltage (Vacc) with which it overlaps in phase amplitude so that the AC power generating system operates independently and continues to supply the power required by the load (11) without interruption.